



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/786,677

02/25/2004

Stewart S. Taylor

884.B91US1

3000

21186

7590

02/08/2007

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. BOX 2938

MINNEAPOLIS, MN 55402

EXAMINER

MAI, LAM T

ART UNIT

PAPER NUMBER

2819

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/786,677	Applicant(s) TAYLOR ET AL.	
	Examiner LAM T. MAI	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10 and 26-28 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 7, 11, 12 and 16-25 is/are rejected.
- 7) ☒ Claim(s) 3, 5-6, 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 7, 16-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Dolman (USP 6,396,345).

Regarding claim 1, Dolman discloses a apparatus and method that teaches an amplifier (122) to produce an output signal (128) and receive an input signal (119) including an adjustable phase (118) to be adjusted in response to an indication of an amplitude (126) of the output (128) signal to reduce a phase distortion (see figures 1 and 3 and their descriptions).

Regarding claim 2, Dolman teaches a detector (160) for detecting amplitude of the output signal.

Regarding claim 4, Dolman teaches translation circuit (170) to transform the indication of amplitude into a control signal to adjust the adjustable phase.

Regarding claim 16, Dolman discloses a method that teaches detecting an indication of an output signal of an amplifier (122) and adjusting a phase of an input signal in response to an indication of an amplitude (126) of the output (128) signal to reduce a change in a phase distortion of the output signal (see figures 1 and 3 and their descriptions).

Regarding claim 17 and 18, Dolman teaches detecting an envelope (160) of the amplitude and a peak value of the amplitude of the output signal.

Regarding claim 20, Dolman teaches reducing the change in the phase 118) of the output signal.

Regarding claim 21, Dolman teaches reducing a change in the amplitude (116) of the output signal.

Regarding claim 22, Dolman discloses a method that performing detecting an indication of an output signal of an amplifier (122) and adjusting a phase of an input signal in response to an indication of an amplitude (126) of the output (128) signal to reduce a change in a phase distortion of the output signal (see figures 1 and 3 and their descriptions).

Regarding claim 23, Dolman teaches controlling (170) variable turning element at the input of an amplification stage included in the amplifier.

Regarding claim 24, Dolman teach performance of the amplifier stage that including adjusting bias value (116 and/or 118)s of an amplification stage included in the amplifier to reduce amplitude distortion included in the output signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dolman (USP 6,396,345)

Regarding claim 7, Dolman fails to teach amplifier includes CMOS technology. However, CMOS technology is well know to people in the art therefore, it would be obvious to one of ordinary skill in the art to implement CMOS technology into Dolman's amplifier to improve performance of the amplifier.

Regarding claim 19, Dolman fails to mention the amplitude of the output signal includes an output signal power value. However, It would be obvious to one of ordinary skill in the art the implement the output signal power value into Dolman's amplitude output signals.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolman as applied to claim 1 above, and further in view of Sypniewski Jozef (USP 6,054,951).

Regarding claim 11, Dolman discloses a apparatus and method that teaches an amplifier (122) to produce an output signal (128) and receive an input signal (119) including an adjustable phase (118) to be adjusted in response to an indication of an

Art Unit: 2819

amplitude (126) of the output (128) signal to reduce a phase distortion (see figures 1 and 3 and their descriptions). Dolman fails to teach antenna coupled to the amplifier.

While, Sypniewski discloses a system that teaches an omnidirectional antenna (ANT in figure 2) coupled to the power amplifier (AMP, in figure 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Dolman's amplifier circuit into Sypniewski's system to improve amplitude and phase error correction.

Regarding claim 12, Dolman teaches translation circuit (170) to transform the indication of amplitude into a control signal.

Claims 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolman as applied to claim 22 above, and further in view of Prasad et al (USP 6,515,540).

Regarding claim 25, Dolman fails to teach or suggest second stage. While, Prasad discloses multiple stages amplifier which is included at least three stages.

I would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Dolman's amplifier circuit into Prasad multiple stage amplifier system to improve control phase and amplitude of the amplification system.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 22-25 are an article per se not stored

Art Unit: 2819

on a computer readable medium in executable form to enable it to cause an article to perform a practical application with useful, concrete and tangible result.

Allowable Subject Matter

Claims 3 and 5-6 are objected to as being dependent upon a rejected base claim, but they would be considered for allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Features of objected claims are not taught or recommended in the prior.

Claims 8-10 are allowable. The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or suggest multiple stage amplifier having input signal includes an adjustable amplitude.

Claims 13-15 are objected to as being dependent upon a rejected base claim, but they would be considered for allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Features of objected claims are not taught or recommended in the prior.

Claims 26-28 are allowable. The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or suggest a translinear circuit to be coupled to the second input and to the indication and to adjust the adjustable phase.

Cited References

The cited references relate to multiple stage amplifier system and phase and amplitude control of the amplifier for each stage of the system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM T. MAI whose telephone number is (571)272-1807. The examiner can normally be reached on 5:30 am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Barnie Rexford can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Lam T. Mai
Art Unit 2819